# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/608,997 | 06/30/2000 | Anand Rangarajan | 10559/229001/P8794 | 1490 |

20985     7590     12/31/2003

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| EXAMINER |
|---|
| HO, CHUONG T |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2664 | |

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 09/608,997 | ANAND RANGAJAN |
| | Examiner | Art Unit | |
| | Chuong Ho | 2664 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☐ Responsive to communication(s) filed on _____.
2a) ☐ This action is **FINAL**.  2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) *1-23* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-23* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some * c) ☐ None of:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____.
   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.
13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
   since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
   37 CFR 1.78.
   a) ☐ The translation of the foreign language provisional application has been received.
14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
   reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## *Claim Rejections - 35 USC § 102*

1.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.       Claims 1-2 are  rejected under 35 U.S.C. 102(e) as being anticipated  by Irwin

(U.S.Patent No. 6,393,026 B1).

In the claim 1, Irwin  discloses the multiprocessor architecture comprises a master node

(first component) and a processor array of multiple slave nodes (intermediate

component, second component) (see figure 7); comprising:

A first component configured to forward data based on lookup in a routing table (see

col. 5, lines 66-67, the main program is loaded in the master node, see col. 5, lines 50-

55, packet forwarding requires procedures, such as translation of a header of the data

packet to identify suitable routes, classification of a packet flow according to source and

destination addresses, type of service route pruning, metric route pruning, policy route

pruning);

A second component (slave node) configured to receive the data (see figure 7, col. 6,

lines 35-37); an intermediate component bridging the first component (master node) and

the second component (slave node) to forward the data in a manner that does not

require a routing table lookup (see figure 7, col. 6, lines 56-67).

3.      In the claim 2, Irwin discloses intermediate components (slave nodes) bridging

the first component (master node) and the second component (slave node) to forward

the data in a manner that does not require a routing table lookup (see figure 7, col. 6,

lines 56-67).

### Claim Rejections - 35 USC § 103

4.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.      Claims 3-11, 12-17, 18-23  are  rejected under 35 U.S.C. 103(a) as being

unpatentable over Irwin (U.S. Patent No. 6,393,026 B1) in view of  Dobbins et al.

(U.S.Patent No. 6,249,820 B1) .

In the claims 3, 20, Irwin discloses the limitations of claim 1 above.

However, Irwin is silent to disclosing the first component is configured to receive a

packet from a first host and the second component is configured to deliver the packet to

a second host.

Dobbins et al. discloses router architecture for forwarding uniscast IP packets across

router interfaces (col. 9, lines 61-62) . As illustrated in FIG.7, each router interface 111,

114, 117 has a forwarding engine 112, 115, 118 sitting on it, and each forwarding

engine knows how to receive and transmit packets on its own interface (see col. 10,

lines 15-17); comprising:

The first component is configured to receive a packet from a first host (see figure 7, 8a) and the second component is configured to deliver the packet to a second host (see figure 7, 8a, col. 10, lines 15-17).

Thus, it would have been obvious to one ordinary skill in the art at the time of the invention to modify the system of Irwin with the teaching of Dobbins to provide the connection between the first component and the first host and the connection between the second component and the second host in order to process and forward of network layer packets.

6.      In the claims 4, 14, Dobbins discloses the routing table used to set a path from the first component to the second component is computed by determining a port that leads to the second host (see col. 10, lines 30-35).

7.      In the claims 5, 15, 21, Dobbins discloses a request for an address to which to send the packet; the first component is configured to forward the request; the intermediate component in the path is configured to forward the request to the second component without looking up the routing table; and the second component is configured to receive the request and to send its address back to the first component (see figure 7, col. 10, lines 42-44).

8.      In the claims 6, 16, 22, Irwin discloses the first component is configured to encapsulate the packet with the address of the second component and to forward the encapsulated packet through the intermediate component to the second component (see figure 7, col. 5, lines 50-55, col. 6, lines 56-61, lines 64-67).

9.     In the claim 7, Irwin discloses the intermediate component act as a transparent

bridge to forward the request and the packet (see figure 7, col. 6, lines 56-61, lines 64-

67).

10.    In the claims  8,  17, 23, Dobbins et al. discloses the second component is

configured to route the packet received through the intermediate component to a

second host (see figure 7, col. 10, lines 32-50).

11.    In the claim 9, Irwin discloses the first component, the intermediate component,

and the second component are connected through a network medium (see figure 7, col.

6, lines 56-61, lines 64-67).

12.    In the claim 11, 10, Dobbins et al. discloses the routing system is configured to

support address resolution protocol (see figure 7, col. 10, lines 32-50).

13.    In the claims 12, 18, Irwin discloses performing a lookup in a routing table to

determine a path to send data  (see figure 7, col. 6, lines 56-61, lines 64-67).

However, Irwin is silent to disclosing the first component is configured to receive a

packet from a first host and the second component is configured to deliver the packet to

a second host.

Dobbins et al. discloses router architecture for forwarding uniscast IP packets across

router interfaces (col. 9, lines 61-62) . As illustrated in FIG.7, each router interface 111,

114, 117 has a forwarding engine 112, 115, 118 sitting on it, and each forwarding

engine knows how to receive and transmit packets on its own interface (see col. 10,

lines 15-17); comprising:

The first component is configured to receive a packet from a first host (see figure 7, 8a)

and the second component is configured to deliver the packet to a second host (see

figure 7, 8a, col. 10, lines 15-17).

Thus, it would have been obvious to one ordinary skill in the art at the time of the

invention to modify the system of Irwin with the teaching of Dobbins to provide the

connection between the first component and the first host and the connection between

the second component and the second host in order to process and forward of network

layer packets.

14.     In the claims 13, 19, Irwin discloses intermediate components (slave nodes)

bridging the first component (master node) and the second component (slave node) to

forward the data in a manner that does not require a routing table lookup (see figure 7,

col. 6, lines 56-67).

### *Conclusion*

15.     Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Chuong  Ho whose telephone number is (703) 306-

4529.  The examiner can normally be reached on 8:00AM to 4:00PM.

16.     If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wellington  Chin can be reached on (703) 305-4366.  The fax phone

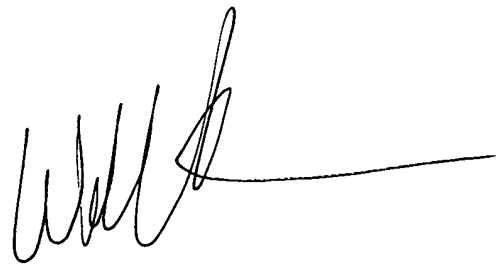number for the organization where this application or proceeding is assigned is (703)

872-9314.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 305-

3900.

Chuong Ho
Examiner
Art Unit 2664

12/26/03

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600